## PATENT COOPERATION TREATY

# **PCT**

# TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

		gent's file referend WO/WW	ce	FOR FURTHER A	ACTION	See Form PCT/IPEA/416
International application No.				International filing da	ate (day/month/year)	Priority date (day/month/year)
PCT/EP2004/013904				07.12.200	4	08.12.2003
Internati	ional Pa	tent Classification	(IPC) or natio	onal classification and	IPC	
C08	B37,	00				
	Applicant BIOGHURT BIOGARDE GMBH & CO. KG					
1.	<ol> <li>This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</li> </ol>					
2.		EPORT consists		_	sheets, including	this cover sheet.
3.	This re	eport is also accor	mpanied by Al	NNEXES, comprising:		
	a. $\sum$	(sent to the	applicant and	to the International Bu	ureau) a total of 3	sheets, as follows:
	a. (sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:  sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).					mended and are the basis for this report and/or
		sheets the dis	which superse			siders contain an amendment that goes beyond in item 4 of Box No. I and the Supplemental
	_	Box.				
	Ь	sent to the	International I	Bureau only) a total of	(indicate type and number	of electronic carrier(s))
						, containing a sequence listing and/or tables
				readable form only, a rative Instructions).	s indicated in the Suppler	mental Box Relating to Sequence Listing (see
4.	This re	eport contains ind	ications relatio	ng to the following iter	ns:	
	$\boxtimes$	Box No. I	Basis of the	report		
		Box No. II	Priority			
		Box No. III	Non-establis	shment of opinion with	regard to novelty, inventi	ive step and industrial applicability
		Box No. IV	Lack of unit	y of invention		
	$\boxtimes$	Box No. V		atement under Article d explanations supporti	- · ·	ty, inventive step or industrial applicability;
		Box No. VI	Certain docu	uments cited		
		Box No. VII	Certain defe	ects in the international	application	
		Box No. VIII	Certain obse	ervations on the interna	ational application	
Date of	submiss	ion of the demand	d		Date of completion of thi	s report
Name and mailing address of the IPEA/EP					Authorized officer	
Facsimile No.					Telephone No.	

International application No.
PCT/EP2004/013904

Вох	No. I	Basis of t	he report	
1.		regard to the lang	guage, this report is based on the international application in the language in which it was filed, unless otherwise m.	
			ed on translations from the original language into the following languageuage of a translation furnished for the purposes of:	,
		internationa	al search (Rule 12.3 and 23.1(b))	
		publication	of the international application (Rule 12.4)	
		internationa	al preliminary examination (Rule 55.2 and/or 55.3)	
2.	rece		nents of the international application, this report is based on (replacement sheets which have been furnished to the ponse to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to	
		the international a	application as originally filed/furnished	
	$\boxtimes$	the description:		
		pages	as originally filed/furnished	
		pages*	received by this Authority on	
		pages*	received by this Authority on	
	$\boxtimes$	the claims:		
		nos.	as originally filed/furnished	
			as amended (together with any statement) under Article 19	
		nos.* 1-12	07.02.2006 with letter received by this Authority on of 07.02.2006	
		nos.*	received by this Authority on	
		the drawings:		
		sheets	as originally filed/furnished	
		sheets*	received by this Authority on	
			received by this Authority on	
		a sequence listing	g and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.	
3.	$\Box$		have resulted in the cancellation of:	
Э.			tion, pages	
			nosgs, sheets/figs	
4.	$\overline{}$		o related to sequence listing (specify):	·e
7.	Ш		onsidered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).	Č
		the descript	tion, pages	
		the claims,	nos.	
		the drawing	gs, sheets/figs	
		the sequence	ee listing (specify):	
		any table(s)	related to sequence listing (specify):	
*	If ite	m 4 applies, some	or all of those sheets may be marked "superseded."	

International application No.
PCT/EP2004/013904

Box No			porting such statement	
1. S	tatement			
	Novelty (N)	Claims	1-12	YES
		Claims		_ NO
Inventive step (IS)		Claims	1-12	YES
		Claims		NO
Industrial applicability (IA)		Claims	1-12	YES
		Claims		_ NO

- 2. Citations and explanations (Rule 70.7)
  - This report makes reference to the following documents:
    - D2: US-A-4 379 059 (HOCKEY ET AL) 5 April 1983 (1983-04-05)
    - D3: WO 91/08281 A (UNILEVER PLC; UNILEVER N.V) 13
      June 1991 (1991-06-13)
    - D4: EP-A-0 283 951 (NATIONAL STARCH AND CHEMICAL CORPORATION; NATIONAL STARCH AND CHEMICAL) 28 September 1988 (1988-09-28)
    - D5: W086/02076
    - D6: DE3246676

#### 2. Novelty

The present application relates to polysaccharide derivatives comprising maleimide units (Ib) or the corresponding open units (Ia) (claim 1). The present application also relates to the corresponding method of producing these polysaccharide derivatives (claim 5) and the use of these polysaccharide derivatives for bonding to cellulose fibers (claim 10).

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

D2 to D6 do not disclose any polysaccharide derivatives comprising maleimide units (Ib) or the corresponding open units (la)(D2: see column 2, lines 17-31; D3: see formula III on page 8; D4: see claim 1; D5: see formula on page 4; D6: see claim 1).

The subject matter of claims 1 to 12 of the present application is novel over D2 to D6.

#### 3. Inventive step

D2 is considered to be the closest prior art.

D2 discloses a softener containing hydroxyethylsubstituted polysaccharides.

The subject matter of the present application differs from the subject matter of D2 in that the polysaccharides contain maleimide units (Ib) or the corresponding open units (Ia).

The problem addressed by the present application was that of providing a polysaccharide derivative for treating cellulose fibers.

This problem is solved by the polysaccharide derivatives comprising maleimide units (Ib) or the corresponding open units (Ia) (see example). This solution is not suggested in D2 and is also not obvious from a combination of D2 with D3 to D6 because these documents do not disclose these units.

The subject matter of claims 1 to 12 of the

International application No.
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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	present application therefore involves an
	inventive step in relation to D2 to D6.